



FIG. 1

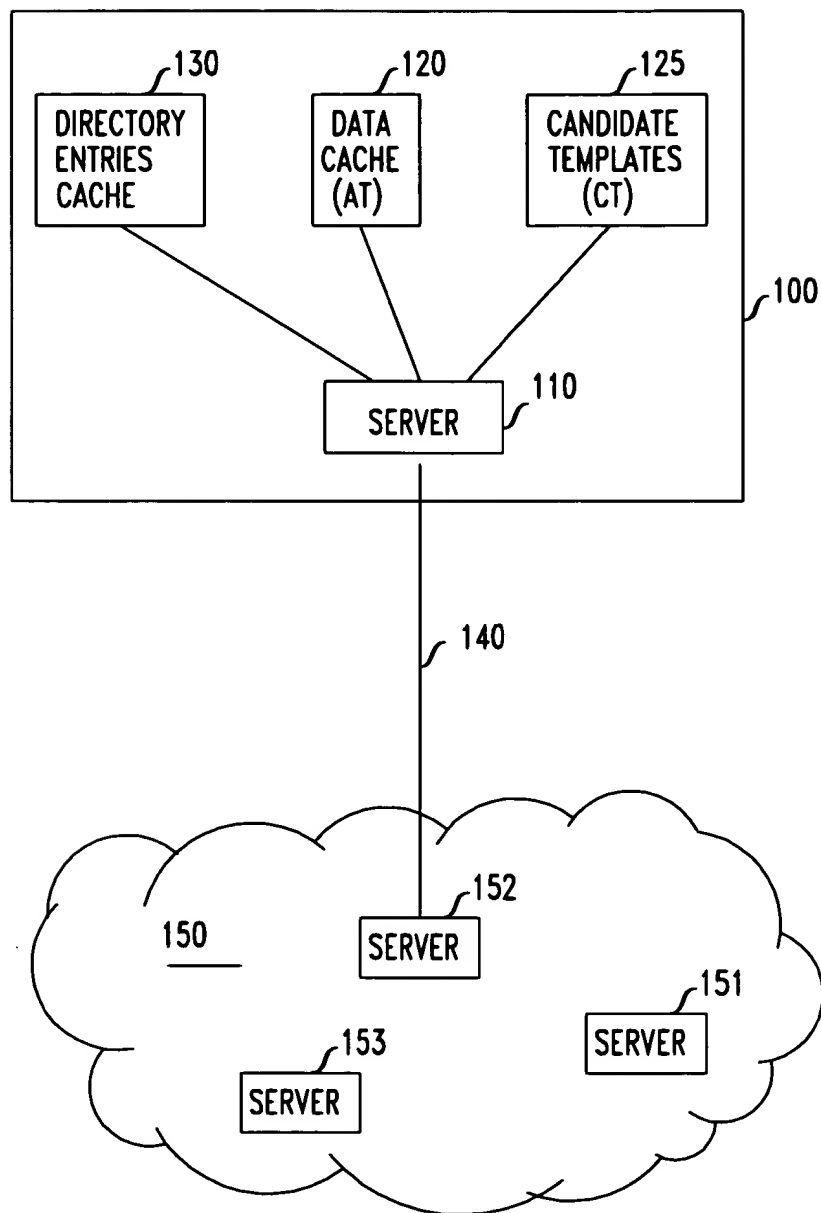




FIG. 2

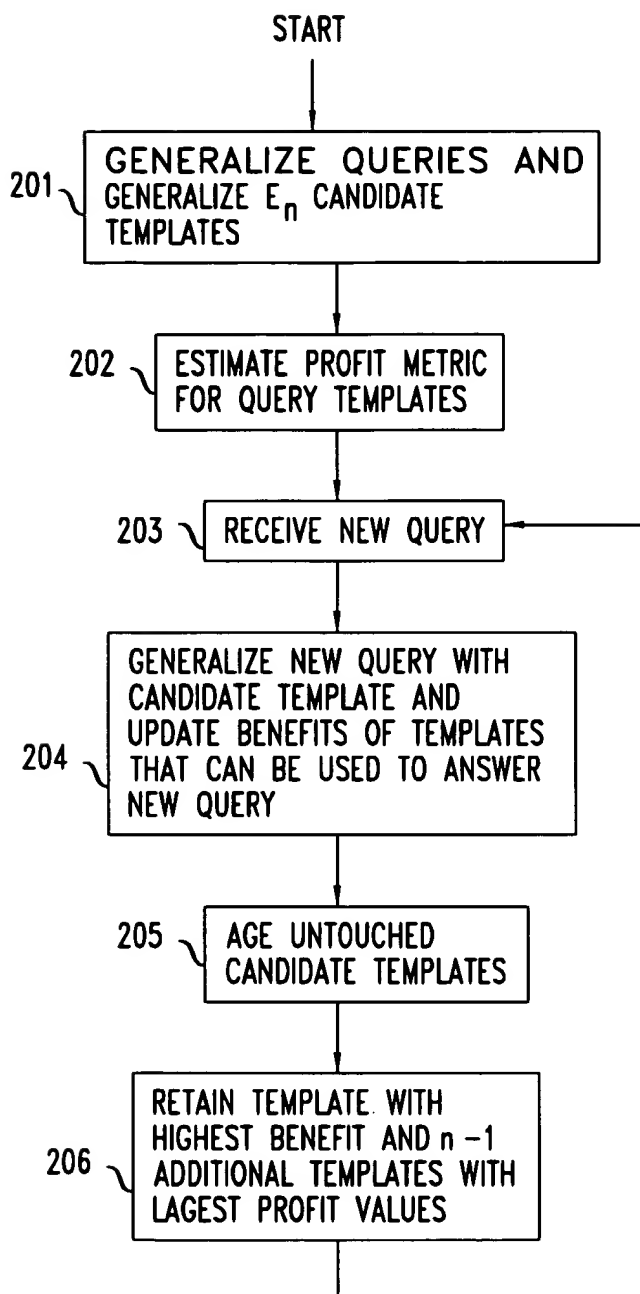




FIG. 3

```
ChooseCandidate (q,CT)
/* CT= { cti, ...,ctn} */
NT=0
FOR EACH ct in CTi
    nt =CompPairTemplate (ct ,q)
    IF (nti=cti)
        /* q: SPECIALIZATION OF cti */
        b(cti)=b(cti)+c(q)
    ELSE IF (nti ∈ NT)
        /* nti: TEMPLATE EXISTS */
        b(nti)=max(b(nti), b(cti)+c(q))
    ELSE IF (s(nti) < S)
        b(nti)=b(cti)+c(q)
        ADD nti TO NT

/* AGE EACH UNTOUCHED cti */
NT=NT U CT
IF (q ∉ NT and s(q) < S)
    b(q)=c(q)
    NT=NT U q
    TEMPLATES WITH HIGHEST
CT= { BENEFIT IN NT }
CHOOSE (n-1) ADDITIONAL
    TEMPLATES WITH LARGEST VALUES
    OF PROFIT PROFIT p(t) IN NT
RETURN CT
}
```



FIG. 4

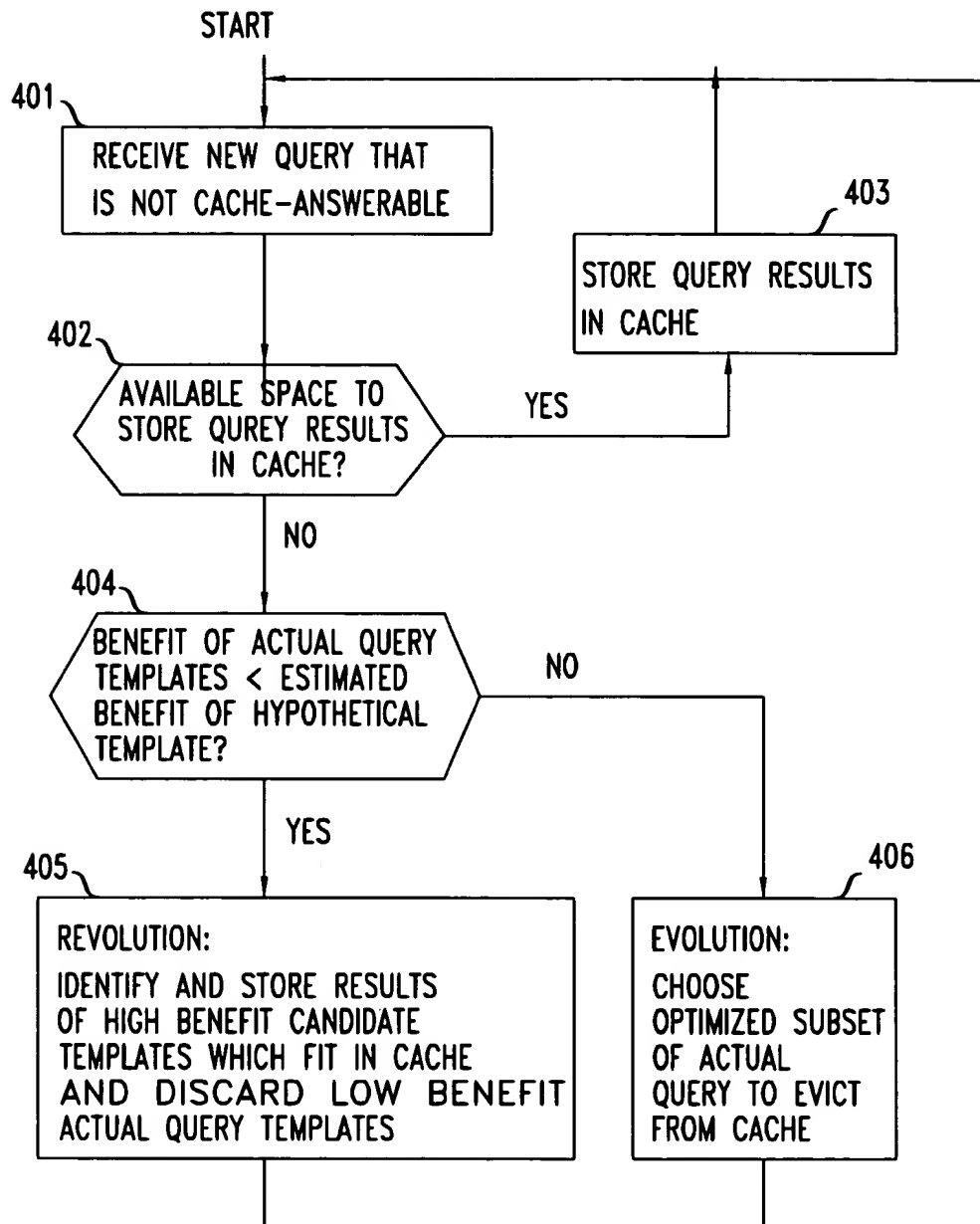




FIG. 5

Revolution (AT,CT) {

/\* COMPUTE CT' AT U CT FOR ADMISSION \*/

SORT THE  $t_i$ 's USING

$$p(t_i) = \frac{b(t_i) - a(t_i)}{s(t_i)}$$

CT'=0

REPEAT

ADD THE HIGHEST RANKED  
REMAINING  $t_i$  THAT CAN  
FIT IN THE AVAILABLE  
CACHE SPACE TO CT'

ADJUST FREE SPACE TO REFLECT  $s(t_i)$   
ADJUST BENEFITS, COSTS,  
SIZES OF UNSELECTED  
TEMPLATES IN CT U AT

RE-SORT

UNTIL (NO MORE TEMPLATES CAN BE ADDED)

CT''=TEMPLATE  $t_i$  in CT U AT

WITH HIGHEST VALUE OF  $b(t) - c(t)$

IF ( $b(CT'') \geq b(CT')$ )

RETRUN CT''

ELSE RETURN CT'

}